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EXAMINER	
NGUYEN BA, HOANG VU A	

ART UNIT	PAPER NUMBER
2122	

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/894,076	YAUNG, ALAN TSU-I	
	Examiner	Art Unit	
	Hoang-Vu A Nguyen-Ba	2122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 September 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the amendment filed September 07, 2004.

2. Claims 1-42 are pending.

Response to Amendments

3. Per Applicant's request, claims 6, 8, 9, 13, 16, 17, 18, 19, 20, 22, 23, 27, 29, 30, 31, 32, 33, 34, 35, 36, 37, 40 and 41 have been amended.

4. The objection to the drawings is withdrawn in view of Applicant's amendments to the drawings.

5. The objection to the specification is withdrawn in view of Applicant's amendment to the specification.

6. The objection to the claims is withdrawn in view of Applicant's amendments to the claims to correct some identified informalities.

7. The rejection of claims 6, 8, 13, 20, 22, 27, 29, 34, 36 and 41 under 35 U.S.C. § 112, second paragraph is withdrawn in view of Applicant's amendments to these claims to correct some identified lack of proper antecedent basis and to clarify the statutory subject matter of claim 29.

8. The rejection of claim 29 under 35 U.S.C. § 101 is withdrawn in view of Applicant's amendments to this claim so it is now directed to statutory subject matter.

Response to Arguments

9. Applicant's arguments filed September 07, 2004 have been fully considered but they are not persuasive. Following is the Examiner's response to Applicant's arguments.

Claims 1, 15 and 29

Limitation (a):

Applicant's arguments:

The cited item 110 is a flowmark definition language and is not a workflow class, the cited item 144 is front end processor and is not a workflow class. Should the Examiner maintain the rejection of the claims, the Examiner is requested to indicate which item is the workflow class in the cited Boden.

Examiner's response:

The Examiner notes the following:

a workflow is a sequence of activities that must be completed to accomplish a task. In a workflow process, the following are defined: how work is to progress from one activity to the next, which persons are to be performed activities and what programs they are to use and whether any other processes are nested in the process (Boden 12:19-35).

a class, in object-oriented programming, is a prescription for a particular kind of object. One can use the class definition (data members and methods) to create objects of that class type, that is, to create objects that incorporate all the components specified as belonging to that class (Ivor Horton, Beginning Java™ 2, What is a class?, Chapter 5).

In view of these remarks, the Examiner considers that Boden's FDL statement 110, which is a description of a workflow process (14:51-59), which is an OOP class because IBM FlowMark™ is a product based on OOP technology (See Byte

article page 4 of 8) does anticipate Applicant's workflow class recited in limitation (a).

Limitation (b):

Applicant's arguments:

> The cited Boden discusses a worklist, but nowhere is there any requirement of a worklist class as required by the claims. Should the Examiner maintain the rejection of the claims, the Examiner is requested to indicate which item is the worklist class in the cited Boden, and/or in which lines of the cited Boden the worklist class of the claim requirement is discussed.

Examiner's response:

The Examiner notes that the cited item 149 of Figure 8 refers to a a workflow process management framework class library (14:51 – 17:14). The function of item 149, which is a modeler is to build a language independent and system independent representation of a workflow process model. A process workflow model has to contain worklist components without which the model would not be a workflow model. Since modeler 149 is object-oriented (SOM process objects, 14:64-65), worklist has to be designed as a class in order to be processed by the modeler 149 (e.g., 16:1-7; the worklist is interpreted to equate to a process object). Furthermore, it is well known in the art of object-oriented programming (OOP) that every object in an OOP language has a corresponding class definition somewhere for objects of that type. Therefore, the Examiner maintains that the claimed elements "worklist" and "class" are anticipated by Boden.

Limitation (c):

Applicant's arguments:

Therefore item 148, is a backend, and items 116, 188, and item 152 are various outputs in a description language, and nowhere do these items or the related description in the cited Boden, teach or disclose the claim requirement of providing a work item class implementing methods and objects to provide information on and manipulate work items when executing one workflow. Should the Examiner maintain the rejection of the claims, the Examiner is requested to indicate which item is the work item class in the cited Boden, and/or in which lines of the cited Boden the work item class of the claim requirement is discussed.

Examiner' response:

Applicant is directed to Boden 15:32-53 where it is shown that backend 148 builds pages from the same data in modeler 149 and thus drives the modeler to give it the information required to build the desired output pages. One of the information required is the work item which is interpreted to be equated to the activity object that is part of a process object (16:15-19). Therefore, in view of this interpretation of the claimed "work item" and that of the claimed "class" elements discussed above, the Examiner maintains that Boden anticipates the claimed elements "work item "and" class.

Claims 2-14, 16-28 and 30-42

Applicant's arguments:

Applicants submit that these claims are patentable over the cited art because they depend from claims 1, 15, or 29 which are patentable over the cited art for the reason discussed above, and because the combination of the limitations in the dependent claims 2-14, 16-28 and 30-42 and the base and intervening claims from which they depend provide further grounds of distinction over the cited art.

If the Examiner maintains the rejection of the dependent claims Applicants respectfully request that the Examiner cite to specific sections of the cited references that disclose the dependent claim requirements as nearly as practical. See, 37 CFR

1.104(c)(2) ("When a reference is complex or shows or describes inventions other than claimed by the applicant, the particular part relied on must be designated as nearly as practicable"); MPEP Rev. 2, May 2004, 707, pg. 700-104.

Examiner's response:

In view of the Examiner's response to Applicant's arguments regarding the patentability of claims 1, 15 and 29, the Examiner maintains that claims 2-14, 16-28 and 30-42 are not patentable because Boden anticipates the incorporated features from independent claims 1, 15 and 29.

Regarding the patentability of the additional features recited in claims 2-14, 16-28 and 30-42, the Examiner maintains that his response given above in conjunction with the rejection of claims 1, 15, 21 would now give context to the reasons why the Examiner cited elements of Figure 8 and their associated text in Boden to support a rejection of the features recited in claims 2-14, 16-28 and 30-42 as being anticipated by Boden. For example, the limitation "calling methods in the workflow class to begin and terminate an instance of one workflow comprising nodes" recited in claim 2 is found to read on Boden's modeler calls 220, 224, 226 (15:14-39; 16:1-32).

In view of the foregoing discussion, the rejection of claims 1-42 under 35 U.S.C. § 102(b) as being anticipated by Boden is maintained and repeated herein for Applicant's convenience.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 15-27 are rejected under 35 U.S.C § 101 because the claimed invention is directed to non-statutory subject matter.

Claim 15 merely recites a system for executing a workflow comprising means for providing workflow class, work list class and work item class. These means are merely software means, i.e., computer programs per se. Such claimed matter, which is descriptive material *per se*, non-functional descriptive material is not statutory because it is not a physical "thing" nor a statutory process as there are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed aspects of the invention which permit the computer's program's functionality to be realized. Since a computer program is merely a set of instructions capable of being executed by a computer, the program itself is not a process, without the computer-readable medium needed to realize the computer's functionality. In contrast, a claimed computer-readable medium encoded with a computer program defines structural and functional interrelationships between the computer program and the medium which permit the computer program's functionality to be realized, and is thus mandatory. *Warmerdam*, 33 F.d at 1361, 31 USPQ 2d at 1760. *In re Sarkar*, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978). See MPEP § 2106 (IV)(B)(1)(a).

On this basis, claim 15 is rejected under 35 U.S.C. § 101.

Claims 16-27, which depend from claim 15, are also rejected under 35 U.S.C. § 101 for the same reasons.

Claim Rejections - 35 U.S.C. § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-42 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,930,512 to Boden et al. ("Boden").

Claims 1, 15 and 29

Boden discloses at least:

providing a workflow class implementing methods and objects to provide information on and control of workflows (see at least Figure 8, items 110, 144; and related discussion in the specification);

providing a work list class implementing methods and objects to provide information on and manipulate work items assigned to the workflow (see at least Figure 5, item 412; Figure 8, item 149; and related discussion in the specification); *and*

providing a work item class implementing methods and objects to provide information on and manipulate work items when executing one workflow (see at least Figure 8, items 148, 116, 188, 152; and related discussion in the specification).

Claims 2, 16 and 30

The rejection of base claim 1, 15 and 29 respectively is incorporated. Boden further discloses

calling methods in the workflow class to begin and terminate an instance of one workflow comprising nodes (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57);

calling methods in the work list class to obtain information on the work items and nodes in one workflow (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57); *and*

calling the methods in the work item class to enable a user to perform actions associated with one work item in one workflow, wherein at least one work item is associated with each node in the workflow (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57).

Claims 3, 17 and 31

The rejection of base claim 1, 15 and 29 respectively is incorporated. Boden further discloses:

calling one method in the work list class to determine nodes and associated work items in the workflow to process (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57);

calling one method in the work item class to lock the work item when providing a user access to workflow actions and documents associated with the work item (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57); *and*

calling one method in the work item class to unlock the work item after the user has completed all actions associated with the work item (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57).

Claims 4, 18 and 32

The rejection of base claim 1, 15 and 29 respectively is incorporated. Boden further discloses:

providing a workflow notification class including methods and objects to provide information on notifications associated with the workflows, wherein one notification is generated if an action associated with one work item is not performed in a specified time period (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57); *and*

calling methods in the workflow notification class to obtain information on one notification and control a state of the notification (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57).

Claims 5, 19 and 33

The rejection of base claim 1, 15 and 29 respectively is incorporated. Boden further discloses:

providing a workflow service class including methods and objects to provide information on workflows associated with one workflow service (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57); *and*

calling one method in the workflow service class to obtain a list of all workflows associated with one workflow service (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57).

Claims 6, 20 and 34

The rejection of base claim 1, 15 and 29 respectively is incorporated. Boden further discloses:

providing a container class including methods and objects to provide information and control containers provided for workflows, wherein the container comprises an object that is used to transfer

information among nodes by enabling users to read and write data to the container (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57)*; and*

calling the methods in the container class to read and write data to the container for at least one user of one work item (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57).

Claims 7, 21 and 35

The rejection of claims 1, 15 and 29 and intervening claims 6, 20 and 34 respectively is incorporated. Boden further discloses:

calling methods in the work item class to make one container associated with one work item available to one user of one work item (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57)*; and*

calling one method in the work item class to enable one user of one work item at a *next node in the workflow access to the container* (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57).

Claims 8, 22 and 36

The rejection of base claim 1, 15 and 29 respectively is incorporated. Boden further discloses:

instantiating a workflow object maintaining information on one workflow, wherein the methods of the workflow class obtain information and control the workflow through variables in the workflow object representing the workflow (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57)*;*

instantiating a work list object maintaining information on work items and nodes in one workflow, wherein the methods of the work list class obtain information on work

items and nodes in one workflow (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57); *and*

instantiating one work item object for each work item in one workflow, wherein the methods of the work item class obtain information on work items from the work item objects, wherein one work list object identifies one or more work items represented by work item objects and wherein one workflow object is associated with one or more work items (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57).

Claims 9, 23 and 37

The rejection of claims 1, 15 and 29 and intervening claims 8, 22 and 36 respectively is incorporated. Boden further discloses:

providing a workflow service class including methods and objects to provide information on workflows associated with one workflow service (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57); *and*

instantiating a workflow service object maintaining information on workflows and work lists for the workflows associated with one workflow service, wherein the methods of the workflow service obtain information on workflows and work lists from the workflow service object (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57).

Claims 10, 24 and 38

The rejection of claims 1, 15 and 29 and intervening claims 8-9, 22-23 and 36-37 respectively is incorporated. Boden further discloses *wherein the workflow service object includes information on associated workflow templates, wherein each instance of an executing workflow is instantiated from one workflow template, further comprising:*

providing a workflow template class including methods and objects to provide information on one workflow template associated with one workflow service (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57); *and*

instantiating a workflow template object maintaining information on one workflow template, wherein one or more workflow objects are associated with one workflow template object (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57).

Claims 11, 25 and 39

The rejection of claims 1, 15 and 29 and intervening claims 8-10, 22-24 and 36-38 respectively is incorporated. Boden further discloses *wherein the workflow service object includes information on one or more associated workflow templates, and wherein one method of the workflow service class is called to obtain information on the one or more workflow templates associated with the workflow service* (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57).

Claims 12, 26 and 40

The rejection of claims 1, 15 and 29 and intervening claims 8, 22 and 36 respectively is incorporated. Boden further discloses:

providing a workflow notification class including methods and objects to provide information on notifications associated with one workflow that generate a notification if an action associated with one work item is not performed in a specified time period (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57); *and*

instantiating one workflow notification object maintaining information on one workflow notification, wherein one or more workflow notifications are associated with one workflow and wherein

one work list includes one or more workflow notifications (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57).

Claims 13, 27 and 41

The rejection of claims 1, 15 and 29 and intervening claims 8, 22 and 36 respectively is incorporated. Boden further discloses:

providing a container class including methods and objects to provide information on and control of containers used in workflows to transport data among the nodes, wherein the container object comprises an object that is used to transfer information among the nodes by enabling users to read and write data to a container (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57); *and*

instantiating one container object maintaining information on one container used in a workflow, wherein one container object is associated with one workflow object and one work item (see at least Figure 8, items 220-248, 149, 250-268; Figure 12; and related discussion in the specification; 9:54-57).

Claims 14, 28 and 42

The rejection of base claim 1, 15 and 29 respectively is incorporated. Boden further discloses *wherein the classes comprise object oriented classes* (see at least Figure 7, items 148, 152; and related discussion in the specification).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang-Vu "Antony" Nguyen-Ba whose telephone number is (571) 272-3701. The Examiner can normally be reached on Tuesday-Friday, 6:45 to 16:45.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tuan Dam can be reached at (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hoang-Vu Antony Nguyen-Ba

Art Unit 2122

November 16, 2004

ANTONY NGUYEN-BA
PRIMARY EXAMINER